

# California GARDEN

COMPLIMENTARY

SEPTEMBER–OCTOBER 1976

Volume 67, Number 5  
Fifty Cents



September 4, and September 18: Workshops for the Christmas Show to make living Christmas wreaths and candle holders. Time: 10:00 a.m.--bring a sandwich. Place: September 4th; home of Mrs. W. F. Hindes. September 18th; home of Mrs. Louis Kulot.

Every Thursday: Craft workshops in the Floral Office at 10:00 a.m. to 3:00 p.m.

October 1, 1976: "America the Beautiful", a special showing of an unusual and outstanding Pictorial Bicentennial of the United States by Mr. Warren Thompson of La Jolla, Room 101, 7:30 p.m.

October 19, 1976: Floral Association Meeting "Oriental Gardens of America" program by Mrs. James L. McFadden; 7:30 p.m. in Room 101.

September 25 & 26: "Beauty and the Beast" A flower show exhibit sponsored by the San Diego Floral Association at the San Diego Wild Animal Park. Participating with the Floral Association are garden clubs and plant societies of San Diego County; 9:00 a.m. to 9:00 p.m. both days.

September 23, 1976: Paul Getty Art Museum, Malibu Beach, plus dinner stop; depart Balboa Park 8:00 a.m., La Jolla Library 8:30 a.m.; \$9.00.

September 25 & 26: San Diego Bonsai "mini" Show; Majorca Room; open both days 10:00 a.m. to 6:00 p.m.; FREE.

October 2 & 3: San Diego County Orchid Society "mini" Show; Majorca Room; Saturday 11:00 a.m. to 5:30 p.m.; Sunday 10:30 a.m. to 5:30 p.m.; FREE.

October 9 & 10: Ikenobo Chapter of San Diego Opening Ceremony Show; Majorca Room; both days 10:30 a.m. to 4:30 p.m. FREE.

October 16 & 17: North County Rose Society 10th Annual Rose Show; Escondido Village Mall; Saturday 1:00 p.m. to 6:00 p.m.; Sunday 1:00 p.m. to 5:00 p.m.; FREE.

October 23 & 24: Crown Garden Club of Coronado 17th Annual Fall Flower Show; theme--"Celebration '76"; Coronado Women's Club, 1735 Strand Way, Coronado; Saturday 1:00 p.m. to 6:00 p.m.; Sunday 10:00 a.m. to 4:00 p.m. FREE.

October 31, 1976: Convair Garden Club presents their Fall Mum and Vegetable Show; Majorca Room; 1:00 p.m. to 5:30 p.m.; FREE.

November 6 & 7: San Diego Tropical Fish Aquarium and Koi Pond Show; Majorca Room & Patio A; Casa del Prado; Saturday 1:00 p.m. to 7:00 p.m.; Sunday 11:00 a.m. to 5:00 p.m. FREE.



OFFICERS

PRESIDENT

Mrs. Harley Cope

FIRST VICE-PRESIDENT

Mrs. Martin S. Firth

SECOND VICE-PRESIDENT

Capt. Spencer C. Church

TREASURER

Mr. Duane A. Herrick

CORRESPONDING SECRETARY

Mrs. David Westheim

RECORDING SECRETARY

Miss Christine Springston

PAST PRESIDENT

Mrs. Colin H. Macdonald

DIRECTORS

Term 1974-1977

Miss Frances Clare

Mrs. Nelson Fisher

Mr. F. George James

Term 1975-1978

Dr. Donald N. Boyer

Mrs. Eugene E. Whigham

Mrs. Jose Garcia

Term 1976-1979

Mr. Harry B. Cutler

Miss Jane Minshall

Miss Helen M. Herney

Park Representative

Mr. George Kempland

HONORARY LIFE MEMBERS

Anne Robinson Tedford

Chauncy I. Jerabek

Alice Mary Clark

Ethel Hoyt

Ada Perry

Samuel Hamill

Etta Schwieder

Margaret Eddy Fleming

EDITORS

EDITOR

Craig Walter Silgjord

ASSOCIATE EDITORS

Bill Gunther

Stuart Macdonald

EDITOR EMERITUS

Alice Mary Clark

DEPARTMENT EDITORS

Arrangements—Adrienne Green

Book Reviews—Theresa Yianilos

Circulation—Penny Bunker

Herbs—Josephine Gray

Historical—Ethel Hoyt

Horticulture—George James

Native Plants—Helen Witham

Photography—Betty Mackintosh

Research—Nibby Klinefelter

Vegetables—Rosalie Garcia

ADVERTISING RATES

For advertising rates and procedures, please contact the Editor, at 296-1217 or write to Editor, California Garden Magazine, 4093 First Avenue, Number 4, San Diego, California, 92103. We reserve the right to final determination as to the suitability of any advertising, artwork or layout.

# California GARDEN

Published Since 1909 by the SAN DIEGO FLORAL ASSOCIATION  
Casa del Prado, Balboa Park, San Diego, California 92101  
Monday through Friday 232-5762

VOLUME 67, NUMBER 5

## ABOUT THE COVER

Our cover artist this issue is Larry Eifert, an artist from Ferndale California. He exhibits his watercolors and drawings in his own Ferndale gallery. His subject, the White-crowned sparrow, is featured in our cover story on page 132.

Our back cover is by Marjorie Brooks Mastro, an illustrator for San Diego City Schools.

## ABOUT THE CONTENTS

- 132 The White-crowned Sparrow *by JANICE K. VICTORIA*
- 134 Have A Cup of Herb Tea *by ROSALIE GARCIA*
- 136 Mulches—The How, When & Why *by GEORGE JAMES*
- 139 Betty Mackintosh—In Memoriam
- 140 Sowing Spring Wildflowers *by HELEN WITHAM*
- 142 The Spurias *by ELEANOR McCOWN*
- 144 Beauty and Browse *by STUART MACDONALD*
- 146 Christmas All Through The Year  
*by GENEVIEVE McALLISTER*
- 148 Selecting and Growing House Plants
- 154 *now is the time*
- 156 *florascope*

POSTMASTER: SEND FORM 3579 TO:  
CALIFORNIA GARDEN, CASA DEL PRADO, SAN DIEGO, CA 92101

PLEASE NOTIFY CIRCULATION DEPARTMENT WHEN YOU  
CHANGE ADDRESSES

California Garden is a non-profit publication of the SAN DIEGO FLORAL ASSOCIATION, a non-profit horticultural organization. The magazine is published bi-monthly. Manuscripts are invited. Manuscripts and illustrations submitted will be handled carefully, but we cannot assume responsibility for their safety. All opinions expressed are those of the author and do not necessarily reflect the views of the editors or the San Diego Floral Association. ©1972 by San Diego Floral Association. No part of this magazine can be reproduced without the written consent of the Editor. California Garden is on the list of publications authorized by the San Diego Retail Merchants Association. Entered as second-class matter, Dec. 8, 1910 at the Post Office at San Diego, California under the Act of March 3, 1879.

# The White-crowned Sparrow

by JANICE K. VICTORIA

*The author heads the Department of Educational Activities at the San Diego Natural History Museum. She earned her Ph.D. in Zoology from U.C.L.A.*

WHEN COLORS fade from summer flowers and the short, cool days of autumn push gardens into dormancy, we begin to look for the arrival of small White-crowned Sparrows to bring a vibrant winter life to our yards.

Although these welcomed visitors weigh little more than an ounce, many have traveled almost 3,000 miles to take up winter residence in San Diego. Their breeding grounds range from the high mountains of California north to the edge of the tundra in Alaska and Canada. In August of each year, the migratory races of this species leave these areas and begin to arrive in San Diego about the third week in September. We can watch their numbers increase in waves through October and finally reach a maximum level in November. Actually, many do not stay in our area, but are just passing through to more southern wintering grounds in Baja California and western Mexico.

You are not likely to mistake the adult birds for any other sparrow in our area. The very handsome males and females look alike with gray breast, streaked brown back, white wing bars, yellow bill, and a crown prominently striped with black and white. The very striking head feathers are often displayed by puffing out the crown to form a low crest. Immature birds are less impressive in appearance with brown and buff head stripes and a pinkish bill. There is a good behavioral field mark that distinguishes White-crowned Sparrows from a distance. When disturbed while foraging alongside a road or open field, the whole flock will suddenly fly up together and disappear into the nearest cover. So synchronized is this movement that the entire group seems to move as one bird.

The arrival of these sparrows in San Diego

is accompanied by much commotion. Fragmentary songs are interspersed with many call and squabbling notes and the birds appear to be in almost continuous motion moving through the trees and brush. Eventually, however, they settle down and forego aggressive behavior. Once established on their wintering grounds, White-crowned Sparrows move about in groups of 30 to 50 birds. A given flock will tend to stay in the same general area throughout the winter and there is evidence that many birds return to the same place year after year. Some banded individuals were identified at the same wintering site for four consecutive years. The flock is held together by a call note described as an "eep" uttered by the birds as they forage and fly from one place to another.

During this time of year the bird's daily activities are primarily concerned with foraging for food. Opportunistic feeders, they will eat whatever is available at the time. Plant seeds are predominant in their diet although leaves, flowers and fruits are also consumed. These sparrows are considered to be quite important as weed control agents. They eat large quantities of seed from knotweed, chickweed, and pigweed among others. Insects and spiders are pursued and eaten by adults when available and also represent an important source of protein brought to nestlings by the parents. White-crowned Sparrows can be destructive to vegetable crops due to their fondness for young plants of the cabbage family and for young peas and beets. Fortunately, the large winter flocks in our agricultural valleys leave for their northern breeding grounds before they can do serious damage.

In San Diego, the sparrows begin to migrate north in April and by the first of May they have all departed. If you are observant, you might be

able to tell when a given flock is ready to leave, for the normally peaceful members begin to show some hostility towards one another. They squabble over food and may pursue and fight each other. Within a few days the flock is gone. Although you might be tempted to try and watch their departure, it is unlikely that you'll see them leave since these birds migrate at night. Once on their way, they fly about 20 mph although they are capable of going almost 40 mph. It is interesting to note that the spring migration takes less time than the fall migration. Thus, birds from San Diego can be on their Alaskan breeding grounds in only 35 days, whereas they may take more than 60 days to fly down in the fall. Nobody really knows why.

The males are the first to arrive at the breeding grounds and although they lived peacefully together all winter, there is no such tolerance for one another now. They are in full breeding condition and begin to set up individual territories which they proclaim with vigorous singing and strongly defend against other males. The females arrive about a week later. They are courted by the males and soon pairs are formed. It appears that the bond established between the members of a pair can last over several years until one partner dies. When this happens, a new mate is soon recruited. The female builds the nest either on the ground or a few feet above in dense vegetation. She lays from three to five eggs and does most of the rearing of the young. The male defends the territory and helps feed the young after they have fledged. On the more southern breeding grounds, up to three broods may be reared in a given season, but far north there is only time for one. By the end of summer, the young are independent and the annual fall migration begins again.

White-crowned Sparrows are among the most common and widely distributed passerine birds in America. Because of this it shouldn't be too surprising to learn that they are also one of the best studied birds, especially regarding their migra-

tory behavior. From them we have learned that birds undergo certain physiological changes in the days prior to each migration and that these changes are stimulated by the relative amounts of daylight and darkness in each 24 hour period. This photoperiodic response to the shorter days and longer nights of fall and to the longer days and shorter nights of spring is quite remarkable. The birds begin to eat at a much greater rate than before and accumulate subcutaneous fat. They can, in fact, increase their body weight by more than 40 per cent in less than five days! These fat deposits serve as fuel for the trip and can be replenished along the way with short stopovers. Accompanying fat deposition is a nocturnal restlessness called *Zugunruhe* (zoo-gun-rú-heh). The birds become very active at night and experimental studies have shown that they orient their movements in a southern direction just prior to fall migration and in a northern direction before the spring migration. *Zugunruhe* eventually builds up to a point where the birds simply fly off into the night along their migratory route.

One of the most fascinating aspects of bird migration is how a bird finds its way. This remarkable feat requires that the bird know where it is, the direction it should go, how to navigate the course and when to stop. All this without the aid of instruments! Although different species probably use a variety of cues, the White-crowned Sparrow, who migrates at night, appears to depend primarily on celestial navigation using the stars for a compass. We can put birds which are in spring migratory readiness in a planetarium and shift the position of the night "sky" to different directions. The birds will orient their *Zugunruhe* towards the "north" whether it is true north or not. Recent studies suggest that the birds may also be able to detect the Earth's magnetic field which would help them orient when the stars are hidden by clouds. We don't know how they do it, or even what organ in the body or part of the brain might be developed for this, but we do know

(continued on page 152)

# HAVE A CUP OF HERB TEA

by ROSALIE GARCIA

A CUP OF hot tea has filled a place in the life of man as far back as we have records—maybe farther. Pouring boiling water over leaves, flowers, or roots of some plant and letting it set until an essence is infused has given pleasure and comfort, and sometimes stimulation. In fact, a great industry has arisen in tropical Asia and India in growing *Camellia sinensis* (*Thea sinensis*) known to us as China tea. It is the tea of the civilized world, full of tannin and caffeine, stimulating enough to be almost addictive. The British, as a people, are so fond of it that their afternoon meal is called “tea” and many of our own social functions in the afternoon are similarly named. The Japanese have incorporated the making and drinking of this same tea, usually the green type, into a ceremonious occasion with religious overtones.

Less exploited and not so fashionable are the teas that have a longer history, for they were made of leaves, roots, flowers, and bark of native plants wherever the people lived. We speak of them as herb teas because they fit into our classification of plants as herbs, those used for flavoring, aroma, and medicine. Whether the first use of a brew of an aromatic plant was for pleasure or medicine is in the area of conjecture, but a body of knowledge was built up and prescribed by medicine men, and later by doctors, until there were concoctions and mixtures for every known ailment. Parkinson and Gerard gathered this knowledge in England in the 16th and 17th centuries into books which were the ‘bible’ of the home doctors. For hundreds of years brews or potions were prescribed as preventive and curative medicine and did not have the social and dietary status of teas of today. (By the way, teas have no calories unless laced with cream and sugar, and can be drunk with abandon by dieters).

Since the infusion of many plants is bitter as gall, one did not drink them for pleasure. In England these were often known as “simples,” and in France as “tsanes.” Whatever they called

them some were even poisonous, but were so bitter that few people were harmed, because they tasted so awful that they were taken in very small amounts.

Herb teas are coming back into favor, for they fit into this natural foods kick that is now so popular, and if the price of coffee continues to climb, they may become more of a habit. Those who are susceptible to the stimulation of caffeine in coffee and China teas have long ago found the solace and pleasure of herb teas, myself included. On the market now, they are more expensive in dried form than China teas, but anyone who has a garden can find plenty of material for teas, or can plant his favorites in a small space in pots. The green leaves or the flowers of living plants may be used to make a better tea, in my estimation, than the dried ones that quickly lose flavor and aroma.

If there is a lemon tree in the garden, the tender green leaves make an excellent tea. Pull off a handful, put in a warm ceramic pot, pour boiling water over them, let stand for ten minutes, then pour a cup of aromatic and lemony tea. Green leaves take longer to steep than dried ones, and roots and woody twigs need boiling for ten to twenty minutes, then allowed to steep for ten more minutes.

There are many other lemon flavored teas one may grow. A decorative shrub that grows well outside in our climate is lemon verbena, *Aloysia triphylla* (*Lippia citriodora*), whose fresh leaves are most aromatic and make a dark, fragrant, amber tea. It is especially good chilled. I keep a pitcher of it in my refrigerator all summer. Dried leaves may also be used, but are inclined to have a bitter tang if steeped too long. One may prune the shrub back several times during the summer, yielding leaves to dry that can be stored in plastic bags or glass jars. It grows from cuttings, and small plants are often for sale on herb counters in nurseries.

Another favorite lemon-flavored plant is lemon



grass, *Cymbopogon citratus*. This subtropical, beloved in Mexico, grows well here too. From a rhizome which starts slowly, it will grow into a big clump which can be divided after a year or so. I've never found it on herb counters, but herb society members and old gardens of many Mexican families have it. Just cut a handful of the blades, put them unwashed in a teapot, add boiling water, and let steep for ten minutes for a pale gold lemon-flavored liquid good for a drink with a meal or chilled for a refresher. The lemon thyme, *Thymus serpyllum* citriodorus, also makes a fragrant tea as well as being good in cookery with fish and salads.

All of the mints make good teas. Peppermint, *Mentha piperita*, and spearmint, *Mentha spicata*, are the strongest. Mints mixed with other leaves make exotic flavors. I like them best fresh, and in our climate, when grown in a damp, shady place, there is always a handful for the teapot. The above mentioned are my favorites, but I go out in the garden and gather others at times.

Comfrey, *Symphytum officinalis*, and borage, *Borago officinalis*, have little flavor, but are so highly touted as being "good for one" that I stuff my teapot with some of the leaves and a few sprigs of mint, making a greenish brown tea that I can stand. Also if there is any catnip or catmint, *Nepeta cataria*, left after the cats get through rolling in it, I clip off the end buds and make a pot of slightly bitter tea, just for a change.

The sages make a strong tea liked by many. My favorite is pineapple sage, *Salvia gracilistya* (*Salvia rutilans*). It is a decorative purplish-green shrub with tiny bell-like red flowers which are edible, as are the blue flowers of borage. One would never suspect that young leaves of raspberry and strawberry plants make a delicate exotic drink. Also leaves of many of the scented geraniums, especially the rose geranium mixed with other leaves, come out aromatic and pleasant.

The rosemary, *Rosmarinus officinalis*, is mixed with some other leaf, for it is very strong and few will like it straight.

Since all herbs were wild at one time and most have not been "improved," there are many that still grow on our hills and roadsides. Horehound, *Marubium vulgare*, is one that was highly regarded in the old herbals, and is still known to us in

cough drops, but its pretty grayish, heart-shaped leaves make a tea of interesting flavor.

Blossoms of common garden flowers remain fragrant in hot water. Rose buds or petals, especially of the "old Roses" are delightful as are violets and jasmine blossoms. Lavender flowers mixed with fennel seeds (even the wild fennel that comes up every spring all over our canyons and hillsides) make a pleasing drink. Florence fennel, finocchio or *Foeniculum vulgare* dulce, which I

(continued on page 152)

Drawing by Marjorie Brooks Mastro



Lemon verbena

# MULCHES

by GEORGE JAMES

A MULCH IS defined as any material which is spread over the soil to protect the roots of plants from heat, cold, or drought, or to keep fruit clean. A material that is safe to use as an organic mulch can be defined as a material, which, with the addition of plant foods and water, will support plant growth. There are other benefits and some problems—not mentioned in the definition—discussed in this article.

The conservation of water, and of the labor needed to apply it are two of the best reasons for using a mulch. Reliable reports tell us mulched soils need only 50 to 70 per cent as much water for the same crops as do unmulched soils. A mulch also maintains a more constant level of moisture in the soil, which promotes a more uniform pattern of root growth than is found in unmulched soils that dry quickly. There are salts present in many soils which inhibit root growth. By using a mulch, these are prevented from accumulating in layers, which could be concentrated enough to damage roots.

The formation of a crust on the surface of the soil, caused by irrigation or rain, that slows the penetration of both air and water, is minimized by a mulch which protects the surface of the soil from compaction, and will also inhibit the germination of weed seeds, reducing the need for cultivation.

A layer of mulch will keep the upper levels of soil uniformly moist and protect them from extremes of temperature, enabling shallow rooted annual flowers or vegetables to make full use of the top inch or so of soil. As organic mulch materials decay, the humus that results improves the fertility and physical condition of the soil. A soil that is cropped continuously without organic material being added will eventually become hard and have poor air and water penetration. Mulches are used around mature plants where the roots prevent digging. In such places the decayed particles of mulch do work down into the soil,

improving upper levels the most. Where it is possible to annually dig the remaining mulch material into the soil, the benefits are greater and effect a greater depth of soil.

Fruits that are produced on the ground, such as squash, cucumbers, strawberries and others, are less likely to decay if a layer of mulch protects them from the dampness of the soil. For further protection, these crops should be irrigated in furrows that keep water away from the developing fruit. A mulch will also keep fruit, flowers, and plants from having dirt splashed on them.

A mulch should not be applied in the spring until after a definite warming trend has started. If applied too early the organic material will act as an insulator and slow the warming of the soil. A mulch used over winter can reduce the radiation of heat from the ground, and as a result, tropical plants could be frozen.

Inorganic materials can be used for a mulch, and do all the organic materials will, but they neither improve the condition of the soil nor add to its fertility. Rocks may be used for mulching and are often used as a decorative addition in the garden. These are best used around established plants where the need for digging is unlikely.



Sheets of black plastic or builders' paper are often used as inorganic mulch materials, and can be used under rocks to reduce weed growth. As neither of these transmit light, they can be used to cover existing weeds and cause them to starve to death. Clear plastic can be used as a mulch but because it transmits light it will not control weeds as well. Plastic sheets are used to mulch commercial strawberry plantings where they reduce water use and protect the fruit from decay caused by damp soil. A plastic mulch raises the soil temperature several degrees during the early spring months and also reflects some heat back to the above ground parts of the plants, both aiding earlier maturity of the crops. In cool coastal areas a plastic mulch also hastens ripening of summer bearing vegetables such as eggplants, peppers, cucumbers, tomatoes, cantaloupes or squash. Plastic sheets are spread over prepared soil before planting and are held in place by burying the edges in shallow trenches. Usually irrigation ditches are made before the plastic is spread, and walkways, which are not covered with plastic, are left so that all work can be done without stepping on the plastic. Plants or seeds are planted through slits cut in the plastic; and it may be necessary to cut additional slits so irrigation water can get through.

There are organic materials which occur as waste in the garden that can be used as a mulch. Hedge shearings and small pieces of prunings can be used around most plants, while larger pieces are suitable for use around mature shrubs and trees. Leaves of most trees and shrubs may be used, the needles of conifers and leaves and sheaths of bamboo being especially good. Lawn clippings are suitable, but often are not used because of the possibility of bringing weed seed or sections of runners of bermuda or similar grasses into the garden where they might establish themselves and increase the work. Experience has shown that these dangers can be reduced if the lawn is cut frequently enough so seeds do not have time to mature, and if the clippings are spread in very thin layers they dry in an hour or two, killing the sections of runners. When clippings are used the mulch is built up over a period of time from many thin layers, each of which is quite dry before the next is added.

Newspaper, another organic material, can be



IN RAMONA:  
*Interesting House and Garden Plants,  
Unusual Succulents, Geraniums*

## ROCK MEADOWS

### SPECIALTY NURSERY

*Open Weekends—go through town to Magnolia, then  
north about a mile to Pile Street, turn left to*

**455 PILE STREET, P.O. Box 488, RAMONA, Ca. 92065**

## SPLENDID TREES FOR LANDSCAPING AND CHRISTMAS (container grown)

Sixty pine varieties, plus cedars, sequoias, coral trees  
and kiwi vines.

**4301 Lynwood Drive  
Chula Vista, California**

*Open 9-5 422-2400*



*(just east of Hwy. 805 & Bonita Road)*

used by spreading layers four to eight pages thick over the garden, holding the paper in place by spreading dirt on the edges. After the paper has been exposed to the elements for several months it will be decomposed enough to be dug into the soil. Humus, the end product of composting, is a suitable mulch but the particles are so small and light they can be carried away by wind or water. For this reason the most effective way to use humus is to mix it into the soil by digging or cultivating.

Animal manures are used but unless they consist mainly of bedding material, straw, or shavings, they should be well decayed before being placed around plants. Manures that are not decayed may be too strong and damage the plants, may have viable weed seeds, or may form a mat or crust on top. Some other materials, grass clippings and large leaves especially, may also do this. The main objection is that the crust will not permit water penetration, and the material below the crust, as it decays, may have a foul odor and attract flies. This condition can be corrected by breaking the crust with a rake so the material beneath is exposed to the air, and water can enter

the soil below.

Commercially prepared soil amendments may also be used for mulching. They are made from waste wood products, sawdust, shavings, or chips that are inexpensive, do not crust, or have any objectional odor to attract flies, and which decay slowly. When the appearance of the bed being mulched is important, such as in an entryway planting, there are bark products that are more attractive than any of the materials mentioned here, yet will be just as beneficial to the soil and plants. Bark is available in small, medium and large size pieces so that a size can be chosen that is in scale with the area and the plants in it. As the bark becomes discolored it can be covered with a thin layer of fresh material.

A mulch material that is composed of small particles is best to use in small areas and around small plants, and a covering of such material need be only about two inches thick. A coarser material, such as straw, needs to be applied about four inches thick for the same benefit, and is more suitable for use on large areas and with large plants.

When considerable amounts of organic material are added to the soil the nitrogen available to the plants is reduced, so to compensate, the commercial products have a modest nitrogen value. When other materials except humus and decayed manures are used, the nitrogen reduction can be prevented by making an application of commercial fertilizer before the mulch is applied.

A mulch improves the growing conditions, but it may create an environment in which slugs, snails earwigs and similar pests thrive. If pests do appear, the use of control measures as soon as the problem is evident is advised, to prevent a serious infestation developing. The use of a mulch around seedlings or other tender plants is not advised as the mulch can create conditions in which damp-off fungus can live which can wipe out the plantings. When the plants are past the tender stage, a mulch can be used with safety.

The benefits from the use of a mulch—saving water, reduction of weeds and labor, improvement of soil, and better growth—out-weigh the problems that might occur. Serious gardeners, who are concerned with the future of their soil will mulch. □

## LA MESA NURSERY

"Everything for the Garden"

Dramatize the garden.

BankAmericard    Delivery  
Master Charge

FREE GIFT WRAPPING

8480 La Mesa Blvd. — 466-5703

## SAN DIEGO'S LARGEST NURSERY FACILITY

with complete, personalized at-  
tention to your every garden need

*Presidio Nursery  
and Florist*

LINDA VISTA RD. at MORENA BLVD  
PHONE 297-4216

## Walter Andersen Nursery

Nursery Stock and Garden Supplies  
for Beautiful Gardens

We Specialize in Indoor Plants

free  
GARDEN  
CLASSES  
9:00 AM  
each  
Thursday  
and  
Saturday



3642 Enterprise San Diego 92110  
Phone 224-8271

## 7580 Hillside Drive

Overlooking La Jolla Shores, just up the hill from Torrey Pines Road, or down the hill from Mt. Soledad, is HILLSIDE NURSERY. Whichever approach you take, you'll find a WONDERLAND OF PLANTS — rare Begonias, Philodendrons, Tropicals, fine House Plants — a wide variety of well grown nursery stock.

Corey Hogewoning, Prop.



# Betty Mackintosh

## —In Memoriam

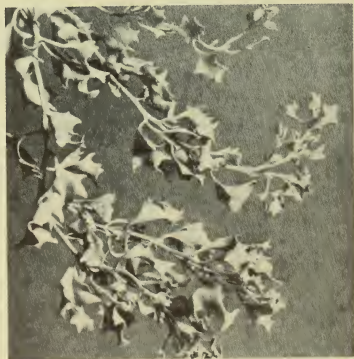
*LONG TIME READERS* of California Garden will remember the beautiful picture of desert holly on the cover of the 1964 Christmas issue, a photograph that was the beginning of our happy relationship with Betty Mackintosh. The editors wanted a good picture of the rare desert holly for a cover. (This plant is on the endangered list.) Knowing that the Museum of Natural History had in their Valentine collection a painting of this holly, the editor and I went to the museum officials to request the loan of the painting to be photographed. Fortunately, a volunteer who overheard the conversation said that she herself had a clump of desert holly growing in her yard, a transplant from her ranch. Then she volunteered the services of her sister, Betty, to take the photograph.

This exceptional picture was the beginning of a story of many years of artistry, dedication, and generosity that Betty devoted to the magazine when she graciously consented to be the staff photographer. The San Diego Floral Association has been and will be ever grateful for her friendship and services. Her magnificent photographs will always be preserved in the volumes of California Garden magazine.

Betty's life of dedicated service ended on August 18, 1976. No more will she appear at flower shows and on special assignments with her tripod and black hood to focus and compose so many of the creations that have meant so much to California Garden readers.

R.F.G.

A Betty Mackintosh Memorial Fund has been established at the San Diego Floral Association. For information you may call 232-5762 during office hours or write to the San Diego Floral Association, Casa del Prado, Balboa Park, San Diego, California 92101.



# SOWING SPRING WILDFLOWERS

by HELEN WITHAM

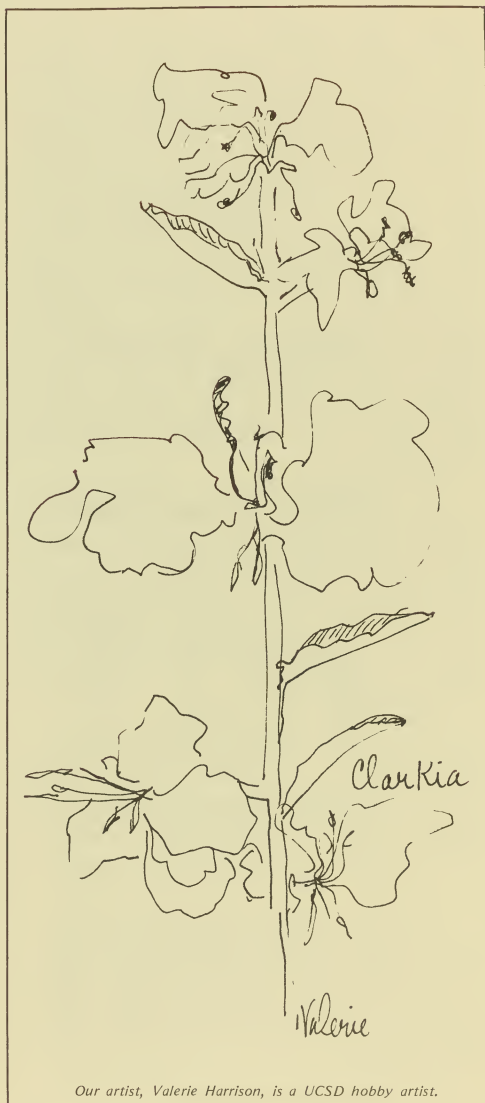
WHILE TRAVELING through California in the 1880's by train, buggy, and horsedrawn stage, on foot and horseback, Elizabeth Homan Thayer was charmed by the wildflowers she found in California and Oregon. She painted and wrote about them with a great deal of love but only a modest amount of skill. The 24 she chose to include in her *WILDFLOWERS OF THE PACIFIC COAST* are, as she says, "...but a handful compared to the multitude we find all along the coast." She continues, "There is no peak so high, or valley so deep, but you see their lovely faces waiting to welcome you. They smile and nod as if inviting you to catch them. You reach up to pluck one, and you discover a bright-colored neighbor beckoning you higher, and so you climb to the very top, all unconscious of the dizzy height, lured on by these bright-colored children of the mountains."

In southern California you can pick wildflowers every month in the year, and in February they make their appearance all over the state, and continue their line of march up the coast, and by April you find them in the fields and woods of Oregon."

Nowadays, especially in coastal areas, we no longer see the fields of flowers on a thousand hills that so astonished early travelers. This is due in part to the diminishing rainfall of recent decades and in part to the diminishing habitat—not many undisturbed hillsides remain to harbor tender little wildflowers by the millions each spring.

But we can grow them for ourselves, quite easily. We can enjoy watching the development of tiny seedlings and reveling in the brief span of bloom. One often hears these and other objections to growing wildflowers—they have a short season; they don't make good cut flowers; they seed down and come up where they aren't wanted. Well, yes, to all three. Using plastic flowers would get around all this, but then all you'd have would be plastic flowers.

Timing is crucial in cultivating wildflowers,



Our artist, Valerie Harrison, is a UCSD hobby artist.

and now is the time. These seeds are programmed to sprout at the beginning of the rainy season. So, in order to have Mrs. Thayer's "lovely faces to welcome us in February," we must plant in fall, mid-October to December. Ideally, the time to sow is just before the first good rain of the season, which may come any time between late October and late November. If it doesn't rain during that period, you are advised to make some rain fall, via sprinklers. Besides stimulating germination at the optimum time of year, this gives the seeds a sporting chance against those birds that lo-o-ve wildflower seeds. Eating your seeds is not to be held against the birds; after all, wild seeds were their bread and butter long before we came on the scene. In the wilds, some seeds always escape being eaten, but we as gardeners can't afford to be as lavish as Mother Nature is providing for doves and goldfinches and still keeping the flowers going, so we must give the seeds whatever help we can.

I myself prefer to plant while rain is falling; a good shower or continued drizzle will embed the seeds in tiny crannies and hide some of them from those hungry birds. Most seeds must be in contact with mineral soil in order to germinate and survive the hot dry spell that often follows the first rainfall.

Second choice of planting times is immediately after a rain. If it appears that the storm is passed and no more rain is forthcoming just then, a good wetting down with a coarse spray will set the seeds in place. If you are all ready to plant and it doesn't rain and doesn't rain, even into December, soak the ground well, scratch it up, sow your seeds and sprinkle it all down.

About the actual sowing—while it is pleasant to dream of tossing seeds along a roadside, walking through a field of grass and planting it to poppies by scattering seed as you go, or dropping them from a helicopter, the seeds so "planted" don't have much of a chance. Many will blow away and others will serve as manna from heaven to mice, birds, and other creatures.

Poppies and other small annual plants can not invade or overcome a long-established field of grass and weeds. However, it is possible to get them established in an uncultivated field, other environmental factors being favorable, by clearing

and digging small spots here and there, sowing seed and raking it in, then performing a rain dance or otherwise ensuring continuous moisture.

Those poppies that are appearing here and there on highway embankments were definitely planted by a hydro-seeding process in which seeds, a mulch or soil stabilizer, and perhaps a small amount of fertilizer are shot into the slope by a strong jet of water under high pressure. Tossing would never do it.

Most common wildflower seeds are small and light, more difficult to distribute evenly than, say, string bean or cucumber seeds. A reasonably even distribution may be achieved by mixing the teaspoonful or so of seed from a packet into a quart or so of dry sand, then sowing sand and all. One time I made this suggestion to a group of Brownie Scouts about to embark of a roadside beautification project. One little girl appeared at the scene with her mix in a coffee can and the question, "I couldn't find any sand so I used kitty litter, is that all right?" Well, it should do; at any rate I never heard that any kittens came of it! □

*California poppy and clarkia are among the wild flowers to be had in seed packets. Sources are: The Theodore Payne Foundation, 10459 Tuxford Street, Sun Valley, CA 91352 (send for free catalog) and the San Diego Chapter, California Native Plant Society, P.O. Box 1390, San Diego, CA 92112 (or fall plant sale).*



# THE SPURIAS

by ELEANOR McCOWN

WHAT IRIS HAS rhizomes like the bearded, flowers similar in form to the Dutch, but larger, and anywhere from four to ten buds to the stalk? What iris grows into a large clump with the years and ranges in height from four to six feet? The *Spurias*, of course.

These hybrids of a closely related group of species are very hardy and tolerant of a wide range of soil and climatic conditions. They can be planted in one place and left undisturbed for years. While their bearded cousins can be divided and transplanted almost anytime, the *Spurias* do not like to be disturbed and are usually transplanted only during their most dormant period in late August through October. It is important that at no time the rhizome be allowed to dry out.

They do best if planted shallowly in a well-prepared, sunny bed and watered thoroughly. In Southern California the blooming season starts in late March and lasts through April and May, depending on the choice of early and late varieties. Since, for the most part, *Spurias* are tall, they make good background plantings for the flower bed. *Spurias* also make attractive pool side plants.

While *Spurias* are subject to the same diseases as the bearded (such as root-rot and mustard seed fungus), they are more resistant. Other pests such as aphids and spider mites do attack the clumps occasionally, but a good hosing down usually keeps damage to a minimum.

A rich variety of colors are available to choose from when planting *Spurias*—some oldies and some just coming on the market. An all-white has not yet been developed, since one characteristic of the *Spurias* is a signal patch, usually yellow. The best whites offered today include the old one 'White Heron,' still a show winner with often four open blooms to the stalk. Others are 'Wake Robin,' 'Frost,' and newest of all 'Sierra Nevada' are also beautiful.



'Dark and Handsome'



'Port of Call'



Another "white" group comes close to being bi-colored with creamy white standards and falls with a large yellow signal bordered creamy white. This group is very vigorous and generous of bloom. It includes 'Driftwood,' 'Imperial Song,' and 'Lydia Jane.' The last named is nicely ruffled. One that is more dwarf growth but with nicely rounded flowers is 'Ruffled Canary.' A new introduction this year would be included in this group. Named 'Plain Jane,' it is the largest flowered Spuria to date.

Yellow coloring in Spurias is a very dominant factor and there is a long list of vigorous varieties with prolific bloom in this category. A lovely two-toned older variety that often has four open blooms is 'Dawn Candle,' with creamy standards and light yellow falls. A deeper yellow with a more spidery form is the variety 'Elixer.' Two recent and popular varieties are 'Forty Carats,' a very large deep yellow bloom and 'Archie Owen' with wide flaring standards and falls in a medium yellow.

One of the most attractive and fascinating color combinations in the Spurias are the "browns." An old-timer 'Driftwood' is still one of the loveliest with its chocolate brown coloring, vigorous growth and four open blooms. A show winner and one of the tallest of the browns is 'Baritone.' 'Imperial Bronze' and 'Butter Paddle,' two more recent introductions, are in a more bronze shading. Almost a beige coloring can be had in the large flowered 'Connoisseur.'

There is a large selection of Spurias to be had in the blue to purple range of coloring. Good varieties in the lighter shades of blue-lavender are 'Highline Lavender' and 'Marilyn Holloway.' Some with medium blue coloring and bright signal patches are 'Fort Ridge,' 'Desert Seagold,' and 'Gay Garb.'

Deep reddish purple is offered in two with small flowers—'Imperial Burgundy,' and 'Red Oak.' Newer and larger in this category is 'Redwood Falls.' A new introduction this year is 'Ada Perry,' in a deep velvety purple with a very small yellow signal.

Pink, as yet cannot be had although growers are working on it. One with a hint of pink is 'La Senda.' Many other varieties are available in various shades with veining and ruffling.

One last but important quality of the Spuria—they are very long lasting as cut flowers and most popular for arrangements. □



'Highline Bluebird'

McDANIEL'S  
miniature roses  
BUSH · TREE ·  
CLIMBER ·  
HANGING  
BASKET

hardy and everblooming  
7523 Zemco St.  
Lemon Grove, Ca. 92045  
please phone (714) 469-4669

# BEAUTY AND BROWSE

by STUART MACDONALD

ONE OF THE more unusual aspects of Southern California horticulture occurs at the San Diego Zoo and Wild Animal Park. Among the many ornamentals that delight the visitor are the ones grown for the pleasure of the animals. While visitors find the plants interesting and attractive, the Zoo residents find some of them delightfully edible. Most of these turn out to be familiar California landscape plants.

Though they do not provide a total diet, several species of plants are fed to a variety of animals to give them something to munch on—browse—a kind of entertainment. The one exception, of course, is the koala. No one has come up with a Purina Koala Chow, and since in the wild koalas eat nothing but eucalyptus leaves, that is what they eat at the Zoo. Eighteen different species of eucalypts are grown on a back lot for feed, according to Ernest Chew, Zoo horticulturist. When the trees reach 8 feet, branches are harvested until the trees are cut back to a stump. They resprout, but with diminishing growth, so the trees are replaced after four harvests.

A tree relished by the giraffes and okapis is *Acacia longifolia*. This is the large, bushy acacia often seen in freeway plantings. For the gorillas the giant timber bamboo, *Bambusa oldhamii*, is harvested. They strip off the leaves and chew on the smaller branches as well. The gorillas, along with tortoises and elephants, also are fed stalks and leaves of banana trees, *Musa paradisiaca seminfera*. This is the variety commonly seen in Southern California, growing to a height of 20 feet. A favorite with the birds is berries of the pyracantha. People who grow this common shrub often observe wild birds relishing its fruit. Another familiar plant grown at the Zoo is *Syzygium paniculatum*, commonly called eugenia. Besides berries for the birds, the leaves are fed to several reptiles and eleven species of monkeys.

While these are the major plants grown for animal browse, others are used when trimmings

become available. The Copa de Oro vines are fed to the monkeys, both leaves and blossoms, as are branches pruned from the hibiscus. Galapagos tortoises are very fond of opuntia, or prickly pear, which they eat spines and all. Cactus is their normal food in the wild. Another seemingly unappetizing plant material is palm fronds, but they are eaten readily by elephants and gorillas. "The elephants," said Mr. Chew, "just rip 'em apart and munch 'em right down."

Culture for these plants is quite simple. No special pains are taken with any of them at the Zoo. During the dry season they are watered once a week, and the bananas twice a week. Mature trees, however, are watered only a couple of times during the summer and are not fertilized at all. Young trees do receive a root feeding in the spring. The trees that are cut for browse are fed three times during the growing season, as are shrubs used for screening and the tropical plants in Fern Canyon and the flight cages. An acid based, iron fortified fertilizer is used since it prevents chlorosis and neutralizes the alkalinity caused by bird droppings as well as our water.

It has been found that most Australian soils have a phosphorous content of less than five per cent, so a fertilizer low in this element, 25-4-8, is used in slow release form for the eucalypts and other Australian ornamentals.

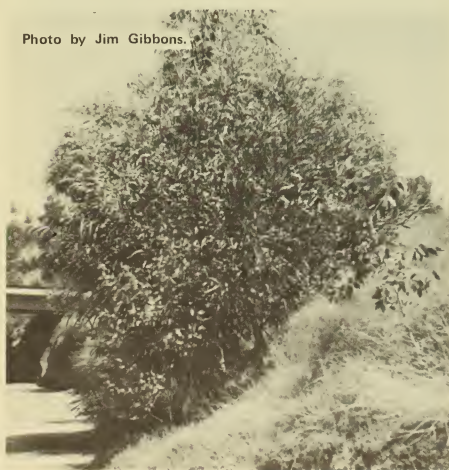
At the Wild Animal Park for the deer, giraffes, antelopes, and gorillas, acacia is also grown but here the species is *Acacia saligna*. It is distinguished by its fairly narrow, dark green leaves, as much as 8 inches in length, which along with its weeping habit earn it the name willow acacia. While still uncommon, this tree is one that deserves wider use as an ornamental, according to Jim Gibbons, Park horticulturist. As a fodder plant he finds it superior to *A. longifolia* because it can be harvested over a period of several years without weakening the tree. The trees are cut to a two foot stump as often as twice a year.

They receive no fertilizer or insecticides, and very little water. Besides these hardy virtues which it shares with *A. longifolia*, *A. saligna* seems to be the more adaptable of the two, and is less likely to die from over-watering. It may be grown as a large, spreading shrub for screening, or trained as a single-trunked tree. It grows about 20 feet high with a straight trunk, while *A. longifolia* tends to be crooked. Some single-trunked specimens of *A. saligna* may be seen along the entrance road to the Wild Animal Park, and as bushes in the hydro-seeded areas. (A limited quantity of *A. saligna* seeds are available for purchase at the Wild Animal Park.)

At one time willow and elm were tried, but the acacia was found to be far easier to grow and harvest. Mr. Gibbons plans to add another 3,000 trees of *A. saligna*, as well as plantings of *syzygium* for the birds and monkeys. The other plants grown are *pyracanthas* for the various birds and more of them are being planted also.

Browse is one of the important factors in the high degree of success they have achieved with these animals. It contributes to their contentment which in turn contributes to longevity and high rate of reproductivity. This is especially important in the case of endangered species. Isn't it satisfying to know that while we are visually enjoying the beauty of these plants, they are giving the animals some of the pleasures and contentment of their natural habitat? □

Photo by Jim Gibbons.



*Acacia saligna*



Photos courtesy of San Diego Zoo.



*Acacia longifolia* being offered to young okapi.



# Christmas All Through The Year

by GENEVIEVE McALLISTER

*Photos by Dr. Lloyd Cottingham*

HAVE YOU EVER looked at a fallen branch of eucalyptus or bottle brush covered with tiny seed pods, admired their beauty and reluctantly thrown them on the compost pile? What do we do with peach pits, acorn caps, and hickory nuts, or the shattered cone of the monkey puzzle tree, the dry tassels of star pine, burrs of liquidambar, or the tiny cones of white alder? Use your imagination to create one or all of the beautiful displays shown in these pictures from just such a collection of compost candidates.

How do you acquire these seed pods, cones, pits, and sticks and pieces for your own collection? It's easy—as you work in your garden and kitchen, visit a friend's garden, or walk down the street, carefully observe nature's cast-offs. You will see beauty where you did not know beauty existed before. The pleasure and excitement of finding new additions for your collection soon becomes a fascinating hobby in itself. Out of that comes the creations that bring the supreme satisfaction of creating beauty from cast-offs. Think recycle!

The patterns, the pictures of the designs that can be evolved are endless. The individual characteristics of each piece of material gives a new personality and individuality to the art form.

Make a wreath or a tree on a styrofoam base or one cut from waste hardboard if you are adept with a jigsaw or can entice the aid of someone who is. The outer edge of the wreath might be the large "petals" of a shattered pine cone, those from the monkey-puzzle tree are especially interesting. Using a white casein-type glue that dries clean, build up the wreath or tree with a variety of interesting items from your cache of materials which have been cleaned and thoroughly dried. When you can no longer find a "hole" to fill

and your aesthetic sense is satisfied, use a clear plastic spray to give highlights to the finished product. Candle-holders, table decorations, wall plaques and other decorative items can be made using the same techniques.

To design a medallion, start with a plastic lid, cut two slots for the ribbon and spray it. Is brown or gold your choice? In both there is beautiful contrast with natural materials. For body you might fill in with star pine tassels, then build up with tiny pods, seeds, cones or even fruit pits. Do you need some color? We spray popcorn and dry navy beans red, green, or chrome yellow or you may use some of those tiny red plastic berries left over from Christmas. The color of the ribbon will depend upon its place in your decor.

Cornucopias have always been a traditional decoration during holidays. The one we show was made by gluing a styrofoam ball inside a wicker form which was purchased from a local arts and crafts shop. There are many, many sizes, shapes, and colors of eucalyptus pods. Several are used with varied size cones in the one illustrated. As you can see, magnolia leaves form the background. For longer lasting quality leaves, use those that have been treated with glycerine solution for best results.

A couple of scraps of plywood, a piece of felt, one of cardboard for the backing and the trimmings you have saved all year plus the tiny boxes that we toss away every day, will build a lasting Christmas tree.

Stand back, admire your handiwork and exclaim as an artist friend from the South used to do, "Ain't it purty!" □





# SELECTING AND GROWING HOUSE PLANTS

*From U.S. Department of Agriculture Bulletin No. 62.*

SUCCESS IN growing decorative plants in the home probably depends as much on good judgment in selecting the plants as on skill in caring for them. First, decide why you want house plants. Do you want them only for use as decorative accessories? Or are you interested in growing and tending the plants as well as in displaying them?

If you want plants only as decorative accessories, buy them for their appearance. Get healthy, well-formed plants that are near the size that you need for decorative effect. Water the plants regularly until their appearance becomes unsatisfactory, then replace them with new plants.

If you are interested in growing house plants and keeping them in good condition year after year, you must next decide how much attention you can give them. Are you able, or willing, to adapt some part of your home to the needs of the house plants? Or would you rather restrict your choice of plants to those that tolerate an environment that is comfortable to human inhabitants? This last course of action is probably the wisest.

Many house plants will survive under adverse household conditions. For best results, however, supply the environment—light, temperature, and humidity—that is recommended for each plant.

Plants that tolerate low humidity do well in the 40- to 50-per cent relative humidity usually found in heated or air-conditioned homes. But this is too dry for many plants. Here are several ways in which you can raise the humidity for those plants needing medium humidity:

- keep plants where the humidity is highest; the kitchen—particularly above the sink—normally is more humid than the rest of the home.

- group plants together. Air surrounding grouped plants usually is more humid than air around a single plant.

- set plants above a tray of gravel, sand, or peat moss that is kept wet.

- install supplemental humidifiers and humidistats in your heating or air-conditioning system.

## POTTING OR REPOTTING

When potting or repotting plants, use containers that have a drainage hole in the bottom. Watertight pots are difficult to care for properly; water tends to collect in the bottom of the pot and injure the plant roots.

When roots of a plant fill the container, the plant stops growing. For the plant to resume vigorous growth, it must be repotted in a larger container and fresh soil. Often it is desirable for a house plant to stop growing. If the plant is as large as you want it to be, do not repot it. Instead, remove some of the soil at the top of the pot at least once a year. Replace it with fresh soil.

Newly purchased plants need not be repotted immediately; their containers usually are satisfactory. You may wish to repot, however, to transfer the plant to a subirrigating pot or to double pot the plant to simplify watering.

## SUBIRRIGATING

Subirrigation supplies water to the plant from the bottom. It maintains a desirable level of soil moisture and lessens the guesswork of when to water. You can buy containers that have a subirrigation system built in the base, or you can make a subirrigation system. Make the subirrigation system from an ordinary flower pot and a wick. A glass fiber wick is best; it does not rot. However, a piece of coarse rope or a tight roll of burlap can be used for a wick.

Place the wick in the hole of the flower pot. Press the top two inches of wick against the bottom of the pot, pack fine soil over it, then fill the pot with soil. For potting soil, mix equal parts garden soil, sand, and peat moss.

After the plant is potted, water it thoroughly from the top. Then place the pot on blocks or stones over a saucer filled with water. The lower end of the wick must lie in the water. The wick soaks up water as needed by the plant.

#### DOUBLE POTTING

Double potting supplies water to the plant through the sides of the pot. Because the soil in double-potted containers dries slowly, time of watering is not as critical as it is when plants are grown in pots exposed to the air. Double potting is especially helpful when growing plants in dim light where normal levels of soil moisture cause spindling growth.

For double potting, repot the plant in a porous clay pot. Set this clay pot inside a larger watertight container and fill the space between the containers with peat moss or shredded sphagnum moss. Water the soil and moss. The moss holds water and supplies it, through the porous clay pot, as needed by the plant.

Double potting is the best practice to follow when growing houseplants in a built-in planter. The planter should have a petcock attached to the liner so excess water may be drained from the planter. (Petcock is a small faucet or valve used in draining unwanted or excess water from the planter.) Fill the bottom three inches of the liner with coarse gravel. Place a layer of charcoal over the gravel; charcoal prevents excess water from stagnating. Fill the rest of the planter with peat moss or sphagnum.

Set the plants, in porous clay pots, up to their rims in the moss. The plants can be watered individually from the top as often as required. They can be turned to allow for variations in lighting. And they can be shifted or substituted at will. These practices are not possible when plants are grown in soil-filled planters.

#### WATERING AND FERTILIZING

Water your house plants with a dilute fertilizer solution. Make this solution by mixing in one gallon of water 1½ teaspoons of soluble fertilizer, analysis 20-20-20, or one tablespoon of liquid fertilizer, analysis 8-12-4. Avoid overwatering. Overwatering is the commonest cause of trouble in growing house plants. No other general rule applies to the watering of house plants. Some plants do best if the soil is

kept moist; others do best if the soil is allowed to dry moderately between waterings. For best results, use subirrigation or double potting. Overwatering is less likely with these methods than it is with watering from the top.

When plants are subirrigated with fertilizer solution, the fertilizer tends to accumulate on the soil surface and pot rim. Every two or three months, replace the white-crusted upper layer of soil and water the top of the pot with tap water to leach away the unused fertilizer. Discard the water that drains out of the bottom of the pot.

If plants are potted in containers that do not have drainage holes, water them from the top. If the containers have drainage holes but are neither subirrigated or double potted, water them from the top or immerse the pot in water to wet the soil. When watering from the top, be careful not to wash soil away from the crown of the plant. Do not get water into the crown; water in the crown may cause the plant to decay.

To water by immersion, set the pot in a container of water. Do not let water flow over the edge of the pot. As soon as the soil appears saturated—in 15 to 20 minutes—remove the pot from the water and let the excess water drain away. Do not allow the pots to remain in the water after the soil is saturated.

#### SUMMER CARE

Plants that are grown in the house during the winter can be moved outdoors for the summer. The best location outdoors for the plants depends on the amount of sunlight they can tolerate. If the plants do well in direct sunlight, they can be set in the open. If they need diffused sunlight, place them under trees or tall shrubs where they will get a mixture of sunshine and shade. If they need subdued daylight, keep the plants on a shady porch.

Plants that are kept in pots outdoors need more frequent watering than they do indoors. To maintain plants through the summer with a minimum of care, sink the pots in the ground up to their rims. Lift or twist the pots once a month to prevent the roots from growing through the drainage hole in the pots.

Before the nights become uncomfortably cool in autumn, lift the plants and repot them if necessary. If they are diseased or infested with



insects, do not return them to the house.

### WATER CULTURE

Some plants can be grown in tap water with little trouble. Among these plants are coleus, aglaonema, ivy, philodendron, scindapsus snake plant, wandering-jew, and syngonium. To do so, add a lump of charcoal to keep the water from souring. To inhibit growth of algae in the water, use a container that does not transmit light. If algae forms, wipe it off of large roots with a sponge. Clean the container thoroughly and fill it with fresh water.

### GROWING PLANTS IN DIM LIGHT

If house plants have the proper amount of water and heat for good growth but do not have enough light, they tend to grow long and spindling. Often, planters are used as decorating accessories in locations that are not lighted well enough for good growth of plants. However, foliage plants can be acclimated to low light intensities.

To grow house plants successfully where they get little or no daylight, try the following:

- water the plants only often enough to prevent wilting.

- reduce the amount of fertilizer that you apply to the plants.

- keep the air temperature as cool as you can tolerate.

- provide supplementary lighting with some fluorescent tubes.

Double pot plants that are to be grown under artificial light. This makes soil-moisture control easier than leaving the pot exposed to the air. Begin watering as frequently as you would if the plant had sufficient light. Then gradually lengthen the intervals between waterings. A few of the oldest leaves may die while you are adapting the plant to dry-soil conditions; this is part of the readjustment of the new environment. Do not let the plant wilt at any time. Fertilize the plants more sparingly than normal. Use only about one-third as much fertilizer as is recommended for plants growing vigorously. Continue to fertilize frequently.

Maintain an air temperature that is as low as human occupants can comfortably tolerate. Most plants thrive at temperatures of 60 to 75 degrees. In general, weakly lighted plants do best in the

lower limits of this range, while brightly lighted plants do best in the upper limits.

If you can add moisture to the air, do so. Plants will grow under conditions of low humidity, but they need more attention to watering than they do under moderate humidity.

Fluorescent tubes are best for supplying supplementary lighting. Regular incandescent lights or reflector floods can be used for spot lighting, but they are too hot when used in numbers large enough to provide the relatively high lighting intensities required by the plants. The required lighting intensity for a plant varies according to the time the plant is lighted; the dimmer the light, the longer the plant must be lighted. If you use a fixture containing two 40-watt fluorescent tubes and light the plants for 16 hours a day, the minimum lighting intensity for growing foliage plants can be supplied by placing the fixture the following height above the plants:

54 to 66 inches—

*Aglaonema commutatum*  
*Dieffenbachia picta*  
*Dracaena sanderiana*  
*Philodendron cordatum*

36 to 54 inches—

*Anthurium hybrids*  
*Bromeliads*  
*Peperomia obtusifolia*  
*Scindapsus aureus*

Closer than 36 inches—

*Fatshedera lizei*  
*Ficus pandurata*  
*Hedera helix*  
*Cissus rhombifolia*

These are maximum distances for satisfactory plant growth. All the plants grow best if they are no farther than 36 inches from the light fixture.

### PROPAGATION

Most house plants can be propagated by cuttings. Take the cutting, containing four or five leaves, from the growing points of the plant. Cut the stem just below a joint. Root the cuttings in moist perlite, vermiculite, or sand. Pasteurize the rooting medium by heating the moist material



in an oven for 45 to 60 minutes at 180 to 240 degrees. Put the rooting medium in a container—a clay pot is satisfactory, but a subirrigating pot is best. Insert the cuttings in the moist rooting medium. If you cannot insert them as soon as they are cut, put them in water to keep them fresh. Now place the cutting-filled pot in a polyethylene freezer bag and close the bag. Place the bag in diffused daylight where the temperature is about 65 to 70 degrees.

Once a week, open the bag and test each cutting for rooting by pulling on it gently. When the cutting resists a gentle pull, it is rooted. Now it is ready to be potted as described earlier.

Geraniums, African violets, coleus, ivy, and philodendrons can be propagated from cuttings rooted in water. If cane sections of dracaena or diffenbachia are pressed in damp moss, shoots will grow from the eyes in the sections. These shoots can be removed and used as cuttings. Cut the cane sections two or three joints long. Dust the ends with fungicide and press them into the damp sphagnum. The eyes continue to produce shoots as often as shoots are removed.

If plants have fleshy leaves or thick petioles (leaf stems), use the leaves as cuttings. Insert the petiole in the moist rooting medium and treat the cuttings as you would tip cuttings. Leaves of *Begonia rex* and other fibrous begonias develop young plants from their primary veins. Insert the leaves in rooting medium or pin the leaves to the surface of the moist medium.

Some plants produce rhizomes—underground stems—and may be propagated by division of the rhizome. Cut the rhizome into sections, each of which contains a leaf bud. Pot the rhizome sections. New plants will grow from them. If the plant produces tubers—like potatoes—cut the tuber into pieces that each contain an eye. Episcia and the ferns produce runners. These runners will root easily if they are pegged to the soil. Large or difficult-to-root plants can be propagated by air layering. To air-layer, make a cutting into the stem and place a toothpick in the cut to keep it open. Wrap moist sphagnum moss around the cut stem and enclose the moss in a sheet of plastic. Tie the ends of the plastic to form a moistureproof package. When roots

(Continued on page 152)

SYMPTOM	POSSIBLE CAUSE
General defoliation-----	Sudden change in temperature. Transplanting shock. Sudden change in lighting intensity— moved from strong sunlight to a dark location. Overwatering.
Leaves drop, shoots remain dwarfed and branch repeatedly. New leaves are small.-----	Manufactured-gas injury (unburned cook- ing gas in the atmosphere).
Browning of leaf tips-----	Improper watering. Exposure to cold drafts. Insect attack. Excess fertilizer.
Loss of normal foliage color-----	Overwatering. Lack of fertilizer. Insect attack.
Spotted foliage-----	Overwatering. Burning from direct sunlight.

that this ability is inborn. Young birds who have never migrated before and who could not possibly have learned any landmarks set out alone unerringly along the same route that the members of their species have followed for centuries. Their homing ability does seem phenomenal. In one study, White-crowned Sparrows were caught and banded in their winter home in San Jose, then transported to Louisiana and released. One year later quite a few were recovered back in San Jose. These, with additional sparrows, were then displaced to Maryland. The following winter, among the birds that had returned to San Jose were several that had also returned from Louisiana the year before. Quite a feat for a six-inch bird weighing only an ounce to know the way to San Jose! □

(Continued from page 151)

have formed—you can see them through the plastic—cut off the top and pot it.

#### PLANT HEALTH

Poor appearance in house plants may be caused by improper watering, sudden change in environment, cold drafts, lack of fertilizer, gas injury, or insect attack. If a plant is damaged by causal agents other than insects, it usually is best to discard the plant and start over again. This time, avoid the condition that led to poor appearance of the old plant. The table on page 151 lists some of the most common causes of unhealthy appearance in plants. □



grow for its edible thickened stems, produces seeds with an anise flavor which will give a lift to any tea. I use them both green and dried. The ancients thought fennel tea would make one thin. If it only would!

Other garden seeds of parsley and coriander give an exotic touch to a drink. Bruise the seeds before pouring hot water over them. Herb teas are a fine base for vodka drinks. What is vermouth but a combination of herbs in white wine. May wine became a favorite because of its flavor of sweet woodruff, *Asperula odorata*, which makes a tea with the flavor of new mown hay. Plant it in the shade with enough room to spread. Chamomile, *Anthemis nobilis*, has little gold flower heads about the size and shape of a small button and grows like a ferny ground cover in spring. It also grows wild along our parkways and in our gardens, and is known in Mexico as manzanilla—little apple—because of its apple aroma and flavor. The flowers are good fresh or dried, and are sold in packages on seasoning racks in our markets.

If one grew up east of the Mississippi, they probably were fed sassafras tea, *Sassafras albidum*, in the spring to thin their blood. It was fragrant, an orange-pink color, and as a child I rather liked it especially with half cream. The bark of the roots is the part used for tea. One can buy it dried in bags at drug or herb stores. The flavor lingers a long time. The English loved it so much that in Colonial times it was shipped to England and in powdered form was made into saloop, a mixture of hot milk or broth. This was then sold in little shops very cheap and lived on as a daily ration by many working people. It must be boiled for half an hour to get the full flavor.

The possibilities for herb teas are endless. I have only touched on the ones I know and use, but I am constantly trying new combinations and adding new ones. Try them as a conversation piece at a dinner party or tea. One can make tea bags of dried seeds or leaves from gauze or cheese cloth, or serve bowls of chopped green leaves for guests to make their own, straight or in combination. Most have never tried an herb tea. Many won't like them, and some will even privately think you are some kind of "nut" for even offering such a treat! □

*Drawing by Marjorie Brooks Mastro*



Lemon grass—*Cymbopogon citratus*

# now is the time

Compiled by PENNY BUNKER

## BONSAI

HERBERT MARKOWITZ

- ✓ to continue watering your trees; these months may be very hot and dry. Some bonsai may be killed if they are allowed to dry more than 24 hours.
- ✓ to fertilize carefully—if young trees show evidence of new growth, feed them about 1/3 the normal amount.
- ✓ to start moving maples and other deciduous trees to shady areas. If long dry spells occur, this may save over-watering and better prepare the tree for dormancy.
- ✓ to transplant some trees in October if they do not require drastic root-pruning and soil change.
- ✓ to enjoy the color changes of deciduous trees and the quiet solitude of conifers.

## BROMELIADS

PHILLIP L. POTTS, Jr.

- ✓ to protect your plants from the hot Santa Ana winds by misting in the mornings and shading them from too intense light.
- ✓ to take off and pot "pups" that are at least 1/3 the size of the parent plant.
- ✓ to keep up the fertilizing. For the best growth and color in your Neoregelias, use a high phosphorus food.
- ✓ to keep your blooming plants indoors where it is cool, so the inflorescence lasts longer.

## CACTUS & SUCCULENTS

VERNA PASEK

- ✓ to repot root-bound plants.
- ✓ to keep moisture level up if Santa Ana winds occur.
- ✓ to make changes or relocate collections before autumn.
- ✓ to start collecting materials for cactus and succulent dish gardens for the holidays. A layer of gravel with some horticultural charcoal helps sweeten the potting soil.
- ✓ to guard against insects, snails, and protect

new growth from sun scald.

- ✓ to give a low nitrogen feeding.

## CAMELLIAS

BENJAMIN BERRY

- ✓ to disbud or thin out the crop of buds to obtain larger and better formed flowers.
- ✓ to maintain the moisture level—any drying out will result in bud-drop.
- ✓ to keep a regular spraying program.
- ✓ to feed lightly with monthly feedings of 2-10-10 or 0-10-10.

## DAHLIAS

ABE JANZEN

- ✓ to keep a regular watering program until the first of October, then gradually cut down.
- ✓ to watch for red spider and mildew—maintain a preventative spraying program.
- ✓ to feed with potash to promote root growth; aids tubers to keep better during winter.

## EPIPHYLLUMS

GEORGE FRENCH

- ✓ to clean up the plants; clear all dead growth and old wood.
- ✓ to retie stems properly.
- ✓ to repot over crowded plants.
- ✓ to still take cuttings in September although July and August are better months.
- ✓ to control snails and slugs and other damaging insects.
- ✓ to start easing force of growth for proper winter hardening — by withholding water, but if days are hot, spray for moisture.
- ✓ to start watering and feeding Christmas cactus.

## FERNES

RAY SODOMKA

- ✓ to spray for aphids and scale; keep snails, pill-bugs and slugs under control.
- ✓ to fertilize plants regularly using a high nitrogen fertilizer.



- ✓ to water and maintain humidity—remember this is Santa Ana time.
- ✓ to trim off dead fronds.
- ✓ to plant spores.
- ✓ to select new varieties—visit nurseries including discount stores.
- ✓ to see that the hot sun is not “sneaking” through saran or lath—the angle of the sun is changing.

## FUCHSIAS

CHAD KROGH

- ✓ to continue fertilizing for fall bloom.
- ✓ to prune back those plants you wish to propagate. The new soft green growth should be ready in four to six weeks.
- ✓ to mist the plants during hot Santa Anas—but DO NOT OVER WATER.
- ✓ to keep seed pods picked off and trim back long growth to promote more blossoms.
- ✓ to clean out fallen leaves from around plants to prevent fungus and molds from rotting branches.

## GERANIUMS

PHIL BUSH

- ✓ to take cuttings—keep in light shade until rooted.
- ✓ to cut back regals carefully.
- ✓ to watch your watering—be careful not to over-water in the fall and winter.
- ✓ to cut your feeding schedule in half. Use fish, 10-5-5 or ammonia sulphate.
- ✓ to clean up old plants; clear off dead leaves, flowers, and soil under plants.
- ✓ to spray soil and under leaves with Cygon E for whitefly and aphids (also might aid in worm control).

## ORCHIDS

LOIS DONAHUE

- ✓ to water and mist, mist, mist—unless we have “unusual weather” this fall.
- ✓ to change to low-nitrogen fertilizer on cymbidiums—buds are forming now.
- ✓ to clean up the greenhouse for winter; check heat control.
- ✓ to feed phalaenopsis a 3-1-2 solution.
- ✓ to keep the “phals” damp as they have no storage tanks.
- ✓ to maintain constant surveillance for chewing and sucking insects.

## ROSES

Mrs. RICHARD BECHTOL

- ✓ to give the last feeding for the year. Apply about 1/4 cup of sulphur per plant.
- ✓ to continue watering plants well.
- ✓ to continue spray control for insects and mildew.
- ✓ to keep spent blooms removed, and cut to leave approximately three leaf clusters on lateral canes.

## VEGETABLES

GEORGE JAMES

- ✓ to plant vegetables that will grow in the cooler nights and shorter days of the coming months.
- ✓ to plant seeds and thin after they sprout: beets, carrots, kohlrabi, lettuce, radish, rutabaga, and spinach.
- ✓ to set plants or start a seed bed for later planting: broccoli, Brussels sprouts, cabbage and Chinese cabbage, cauliflower, chard, celery, kale, and lettuce.
- ✓ to try the following for a change: broadbeans, fava, horsebean, Windsor bean. One vegetable with many names having seeds that look like and are used like lima beans, and grows well fall through spring.
- ✓ to take a chance and plant seeds of bush green or yellow wax beans. These mature in 50 to 60 days and in a bright, warm location will produce a worth while crop if planted at once.

## GREEN THUMB ITEMS

- to keep watering and feeding established lawns.
- to buy tulip bulbs to chill in refrigerator until November.
- to thin branches of dense evergreen trees to protect them from winter wind damage.
- to feed established bearded iris.
- to prune established wisteria plants to prepare vines for their spring bloom.
- to plant the beardless iris—Spurias, Louisianas, Siberians, and Japanese.
- to place a good mulch such as peat moss or ground bark around azaleas, camellias.

# florascope

••••• Soak ranunculus over night and you will have no trouble telling which way to plant them.

••••• Let pods of money plant grow until they become brown and plant appears to die. Test pods by rubbing between fingers. Do not pull plant until outer brown husk comes loose easily. They must dry in ground. Husk in garden where new plants are wanted.

••••• Winter sweet peas may be planted now. Make sure you get the winter type!

••••• Broken branches and deadwood from fruit trees should be pruned out now. Continue to irrigate deeply, at long, regular intervals.

••••• Early-blooming azaleas will begin to bloom this month and next. Bright color from azaleas may be enjoyed for a longer period of time by planting early varieties.

••••• September feedings keep many plants in bloom into fall—roses are prime examples. Also, lawns may be fed now.

••••• This is also a most favorable time to seed a new lawn.

••••• Aerate compacted lawns now using a foot spiker, coring tool, or mechanical aerator.

••••• Fall is an ideal time to plant California native evergreens. The early winter rains will help establish the plants.

••••• Snails become more active as the weather cools. Bait or pellets provide an easy and effective control.

••••• Brighten bare spots in the garden by sinking a few containers of blooming chrysanthemums into the ground.

••••• Plant camellias in October. The early-flowering types are beginning to bloom or soon will be. By properly selecting varieties, you can have camellias in bloom from now until late spring.

••••• Rake leaves as they fall and remove all faded summer annuals. It is none too early to begin the fall clean-up in the garden.

••••• When planting bulbs in pots or containers don't be afraid to crowd them. The more you plant, the more colorful the show.

••••• Plant cyclamen in October for winter and spring bloom.

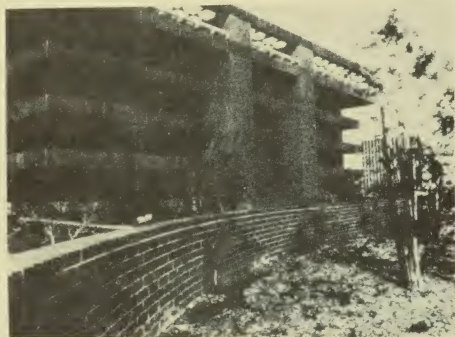
••••• Plant bird-of-paradise in a warm, protected area in October and enjoy its spectacularly cool season flowers.

••••• Roses may still be going strong even in October, but don't feed them now. You don't want a lot of new growth with winter weather just ahead.

••••• Perennials may still be planted in October and November. Seedlings of the most popular perennials are available in nursery flats and are inexpensive to plant.

••••• Enjoy home-grown vegetables during the cool season—plant carrots, beets, turnips, lettuce, onions, peas, cabbage, and cauliflower.

# BLOC HAZARD BRIC



IF YOU'RE BUILDING A CASTLE  
GIVE US A CALL

or

IF YOU'RE BUILDING A WALL  
GIVE US A CALL

NO JOB TOO BIG OR TOO SMALL  
GIVE US A CALL

HAZARD PRODUCTS, INC.

your complete masonry & landscape centers

three locations to serve you

Hazard Center Mission Valley-----297-4144  
Cabrillo Freeway & Friar's Road  
Hazard Center El Cajon-----448-7411  
1155 Vernon Way, El Cajon  
Hazard Center Chula Vista-----427-2062  
491 "C" Street, Chula Vista

## HAZARD PRODUCTS

YOU ARE INVITED TO SUBSCRIBE TO CALIFORNIA GARDEN MAGAZINE  
OR BECOME A MEMBER OF THE SAN DIEGO FLORAL ASSOCIATION BY  
COMPLETING THE APPLICATION BLANK AND MAILING IT WITH YOUR CHECK

TO: The San Diego Floral Association

Casa del Prado-Balboa Park  
San Diego, California 92101

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

ZIP \_\_\_\_\_

Check appropriate box:

- ☐ \$5.00 Individual  
☐ \$6.00 Family  
☐ \$10.00 Sustaining  
☐ \$25.00 Contributing  
☐ \$3.00 Magazine ONLY



*The San Diego  
Floral Association*  
Founded 1907 — Incorporated 1910  
San Diego's Oldest  
and Largest Garden Club  
M-W-F (10-3) 232-5782

454-0404

## Carlson Travel Service, Inc.



**A TRAVEL-EXPERIENCED STAFF**

1033 PROSPECT LA JOLLA, CALIFORNIA 92037 P. O. BOX 1453

## LA COSTA FLOWER SHOP & NURSERY

German Peat Moss, 7.5 cubic  
foot bales  
Pick up at Nursery  
400 La Costa Avenue

(714) 753-4336

Leucadia, Calif. 92024

## G. S. JOHNSON ROSE NURSERY



*Rose Specialists*



**Bushes - Climbers - and Tree Roses**

Bare Roots in Season

*in cans, available all year*

Spray Materials and Fertilizers

24 YEARS IN SAME LOCATION

8606 Graves Ave. Santee  
corner Graves & Prospect

Off Highway 67  
Phone 448-6972

Open 8 A.M. to 5:30 P.M. Closed Wednesdays

## Antonelli Brothers

**TUBEROUS BEGONIAS**

2545 Capitola Road  
Santa Cruz, California 95062  
36-page color catalog 25 cents

## WATER LILIES

Plants, Supplies, Advice  
Building & Planting Inst.

Free Color Catalog

**VAN NESS WATER GARDENS**  
2460 N. Euclid Avenue  
UPLAND, CA. 91786



**BLUE  
PACIFIC**

*Nursery, INC.*

4876 SANTA MONICA AVENUE OCEAN BEACH  
SAN DIEGO, CALIFORNIA 92107  
222-1151 phone

(714) 448-0659

Open Weekends 1 to 5 P.M.  
Week Days by Appointment

## Hardy & Fouquette Orchids

WHERE YOU FIND THE UNUSUAL  
*Along With The Usual*

Carlton Hills

9443 E HEANEY CIRCLE  
SANTEE, CALIF 92071

**DISCOVER** San Diego's newest and largest  
interior plant nursery.

**SEE . . .** Southern California's  
most advanced greenhouse. 4,200  
sq. ft. of top quality and rare interior plants.

**SHOWPLACE** of living beauty  
FRANK & ELSIE ANTONICELLI, OWNERS



**SPRING VALLEY INTERIOR PLANTS**

Daily 10-4 Sun 10-5

8875 Jamacha Road, 464-3909

1 blk east of K-Mart





## SAN DIEGO FLORAL ASSOCIATION

**CASA DEL PRADO, BALBOA PARK**  
(Under the sponsorship of the Park and Recreation Dept., City of San Diego)  
Office Phone Number 232-5762  
Third Tuesday, Casa del Prado  
President: Mrs. Harley Cope—459-7688  
6608 Avenida Bizarro, La Jolla, 92037

**FLOWER ARRANGERS' GUILD OF S.D.**  
First Thurs., Casa del Prado, 9:00 a.m.  
Prs: Mrs. Frank Thomas—583-7045  
6819 Claremore Ave., S.D. 92120

### MEMBER CLUBS

**ALFRED D. ROBINSON BRANCH OF THE AMERICAN BEGONIA SOCIETY**, Second Tues., Homes of members, 10:30 a.m.  
Prs: Mrs. Don Donahue—273-9677  
3251 Innuit Ave., S.D. 92117

**CONVAIR GARDEN CLUB**  
First Wed., Casa del Prado, 7:30 p.m.  
Prs: Mrs. Virginia Soderberg—582-7098  
6107 Arno Drive, S.D. 92120

**FLOURES DE LEAGUE**  
Sec. Mon., Homes of members, 10:30 a.m.  
Prs: Mrs. James D. Casey, Jr.—459-5322  
1350 W. Muirlands Dr. La Jolla 92037

**IKEBANA INTERNATIONAL CHAPTER NUMBER 119**, Fourth Wed., Casa del Prado 10:00 a.m.

Prs: Mrs. Wm. Pardoe—466-1584  
7757 Topaz Lake Ave., S.D. 92119

**LA JOLLA GARDEN CLUB**  
Third Tues., 1:00 p.m. La Jolla Women's Club, 715 Silverado Road, La Jolla  
Prs: Mrs. Bolivar Roberts—454-4988  
939 Coast Blvd., La Jolla, 92037

**LAS JARDINERAS**  
Third Mon., 10:00 a.m. Homes of mem.  
Prs: Mrs. Robert Conway—454-4874  
7826 E. Roseland Dr., La Jolla 92037

**ORGANIC GARDENING SOCIETY**  
Third Fri., Casa del Prado, 7:30 p.m.  
Prs: Mr. Art Hobbs—442-9161  
1284 Tangerine, El Cajon, 92021

**PALOMAR DISTRICT, CALIFORNIA GARDEN CLUBS, INC.**,  
Dir: Mr. Joe E. Goble—728-1286  
730 S. Live Oak Park Rd., Fallbrook 92028

**POINT LOMA GARDEN CLUB**  
Second We., S.D. Federal, Rosecrans and Canon, 10:00 a.m.  
Prs: Mrs. Harry Ayers—224-3810  
4644 Tivoli St. S.D. 92107

**SAN CARLOS GARDEN CLUB**  
Fourth Tues., San Carlos Club, 6955 Golfcrest Drive

Prs: Mrs. Wendel Bemis—465-6834  
7808 Lake Adlon Drive, S.D. 92119

**SAN DIEGO BONSAI SOCIETY, Inc.**  
Second Sun., Casa del Prado, 1:5 p.m.  
Prs: Dr. Herbert Markowitz—224-8552  
876 Armada Terrace, S.D. 92106

**SAN DIEGO BOTANICAL GARDEN FOUNDATION, Inc.**

Second Thurs., Casa del Prado  
Prs: Mrs. Eugene Cooper—295-7938  
4444 Arista Drive, S.D. 92103

**SAN DIEGO CACTUS & SUCCULENT SOCIETY**

Second Saturday, Casa del Prado, 1:30 pm  
Prs: Mr. Martin Mooney—427-6796  
97 "K" Street, Chula Vista 92011

**SAN DIEGO CAMELLIA SOCIETY**

Third Wed., Casa del Prado, 7:30 p.m.  
Prs: Dr. Jack Worden—280-6268  
2746 Copley Street, S.D. 92116

**SAN DIEGO CHAPTER, CALIFORNIA NATIVE PLANT SOCIETY**

Fourth Wed., Casa del Prado, 7:30 p.m.  
Prs: Mr. Fred Sproul—461-0649  
P.O. Box 7497, S.D. 92107

**SAN DIEGO COUNTY DAHLIA SOCIETY**  
Fourth Tues., Casa del Prado, 7:30 p.m.  
Prs: Mr. Gerald Lohmann—279-5135

6616 Rockglen Ave., S.D. 92111

**SAN DIEGO COUNTY ORCHID SOCIETY**  
First Tues., Casa del Prado, 7:30 p.m.

Prs: Mr. Ben Hardy—448-0659  
9443 East Heaney Circle, Santee, 92071

**SAN DIEGO COUNTY WILDLIFE FED.**  
Prs: Steven Licata—296-2984  
4525 Hamilton Street, S.D. 92116

**SAN DIEGO EPIPHYLLUM SOCIETY**  
Second Wed., Casa del Prado, 7:30 p.m.

Prs: Mr. Eugene Lund—469-1677  
5666 Aztec Drive, La Mesa, 92041

**SAN DIEGO FUCHSIA SOCIETY**  
Second Mon., Casa del Prado, 7:30 p.m.

Prs: Mr. William Selby—424-3432  
1333 Triton Avenue, S.D. 92154

**SAN DIEGO GERANIUM SOCIETY**  
Second Tues., Casa del Prado, 7:30 p.m.

Prs: Mr. Larry L. Sisk—283-2776  
3179 No. Mountain View Drive, SD 92116

**SAN DIEGO/IMPERIAL COUNTY IRIS SOC.**  
Third Sun., Casa del Prado, 1:30 p.m.

Prs: Mr. Frank Marko—745-2554  
Rt. 4, Box 439-D, Valley Cntr. 92082

**SAN DIEGO ROSE SOCIETY**  
Third Mon., Casa del Prado, 7:30 p.m.

Prs: Mr. Richard Bechtel—442-7180  
10212 Vista de la Cruz, La Mesa 92041

**SAN DIEGUITO BRANCH, AMERICAN FUCHSIA SOCIETY**

Prs: Dorothy S. Behrends—753-3453  
442 Orpheus Ave., Encinitas 92024

**SAN DIEGUITO GESNERIAD CLUB**  
Prs: Mrs. Roman Shore—728-7044  
P.O. Box 828, Fallbrook, 92028

**SOUTHWEST HEMEROCALLIS SOCIETY**  
Four meetings per year, Oceanside

Federal Savings, Vista, California  
Prs: Ray Chesnik—744-3851  
418 Buena Creek Road, San Marcos 92069

**SOUTHWESTERN GROUP, JUDGES' COUNCIL CALIFORNIA GARDEN CLUBS, Inc.**, First Wed., Casa del Prado, 10:30 a.m.

Prs: Mrs. Donald Innis—225-1464  
3211 Trumbull, S.D. 92106

**VILLAGE GARDEN CLUB of La Jolla**  
Fourth Thurs., 1:00 p.m., La Jolla

United Methodist Church, 6063 La Jolla Blvd., La Jolla, Ca, 92037

Prs: Mrs. George Bauhan—459-9024  
5630 Bellevue Ave, La Jolla, 92037



### SPECIMEN PLANTS

for your home and for your garden

ALL SIZES  
AND VARIETIES

**Bennett's**  
**GARDEN CENTER**

7555 Eads Avenue La Jolla 454-4241

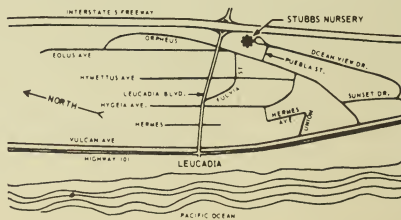


### STUBBS FUCHSIA NURSERY

770 OCEAN VIEW AVENUE  
LEUCADIA, CALIFORNIA 92024

PHONE: (714) 753-1069 DICK MORRIS, PROP

OVER 150 VARIETIES — HIGHEST QUALITY — LOWEST PRICES



RETURN REQUESTED  
RETURN POSTAGE GUARANTEED  
CALIFORNIA GARDEN  
San Diego Floral Association  
Casa Del Prado, Balboa Park  
San Diego, CA. 92101

SECOND CLASS POSTAGE PAID AT SAN DIEGO

Mrs. W. F. Bindas  
4621 Panohoy Drive  
La Mesa, Calif.  
92041

"Beauty and the Beasts"



San Diego  
Wild Animal Park

Saturday Sept. 25<sup>th</sup> 1976  
Sunday Sept. 26<sup>th</sup> 1976